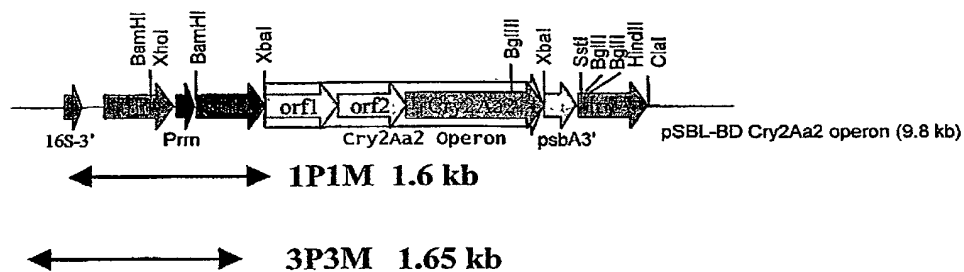
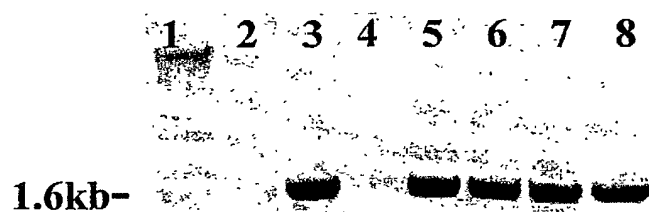
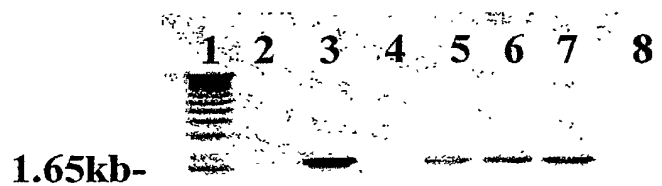


A.**B.****C.****Figure 1**

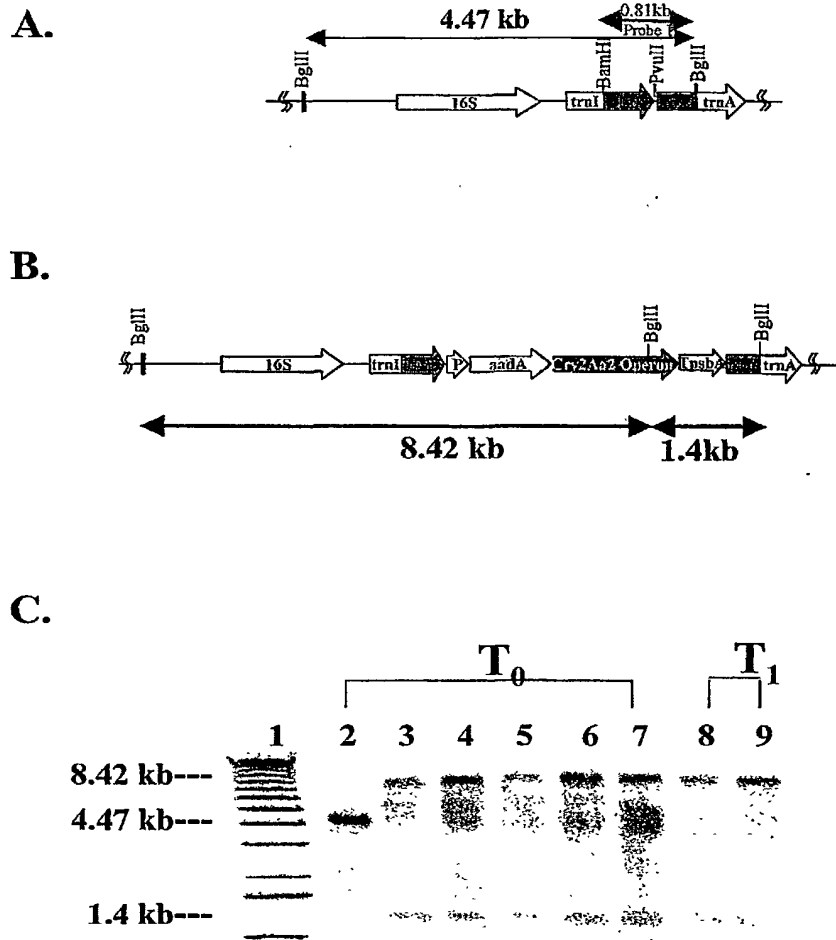
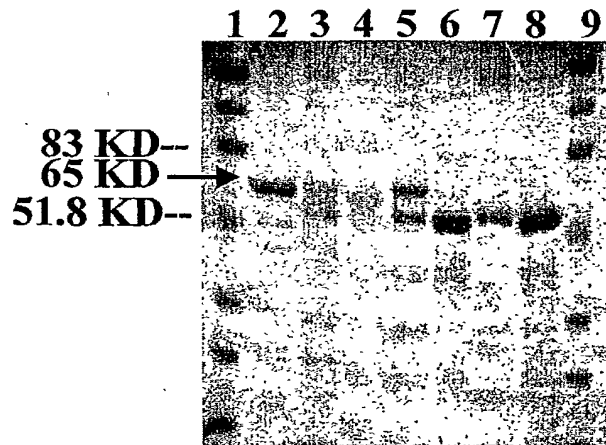
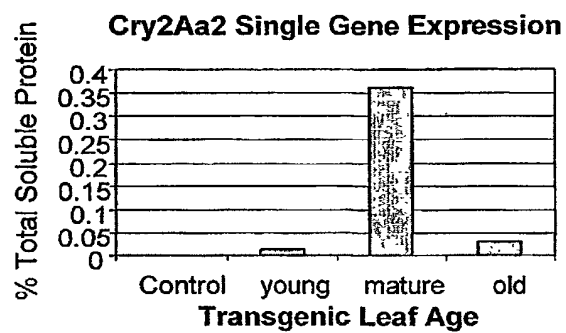


Figure 2

**Figure 3**

A.



B.

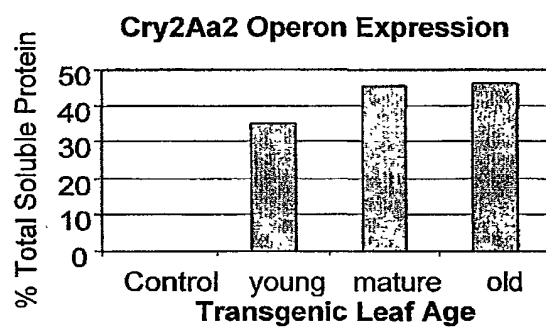


Figure 4

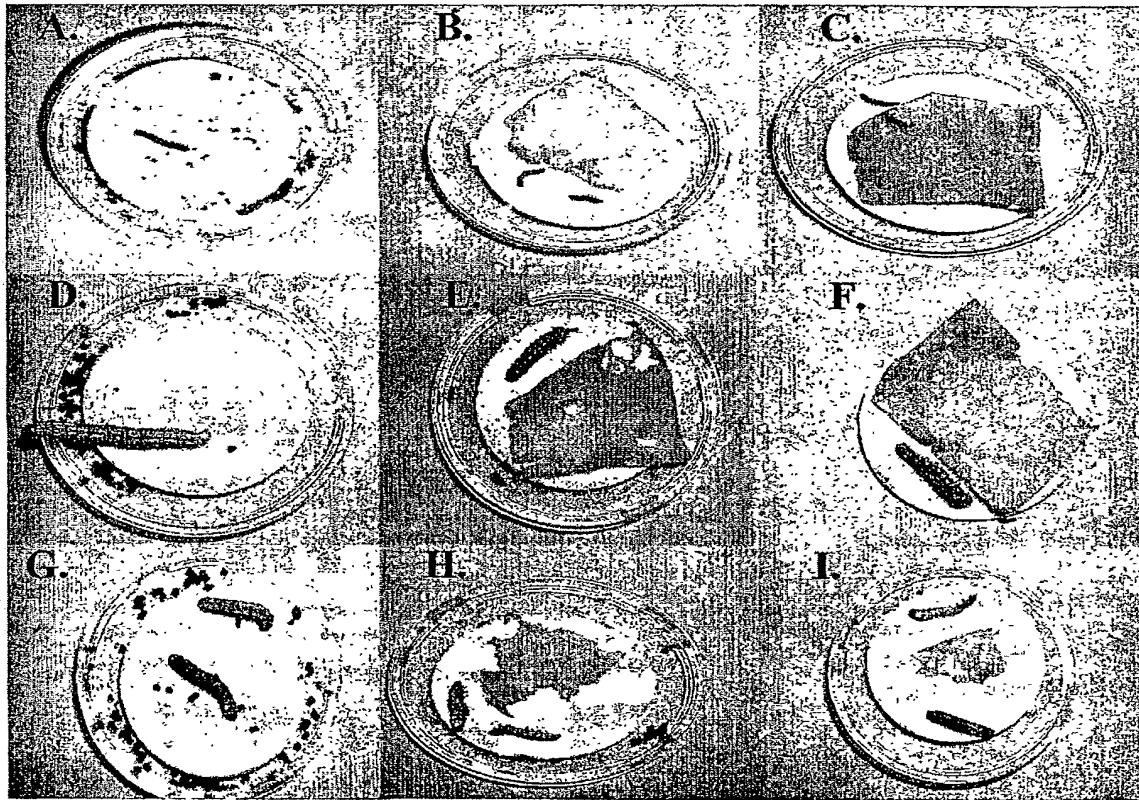


Figure 5

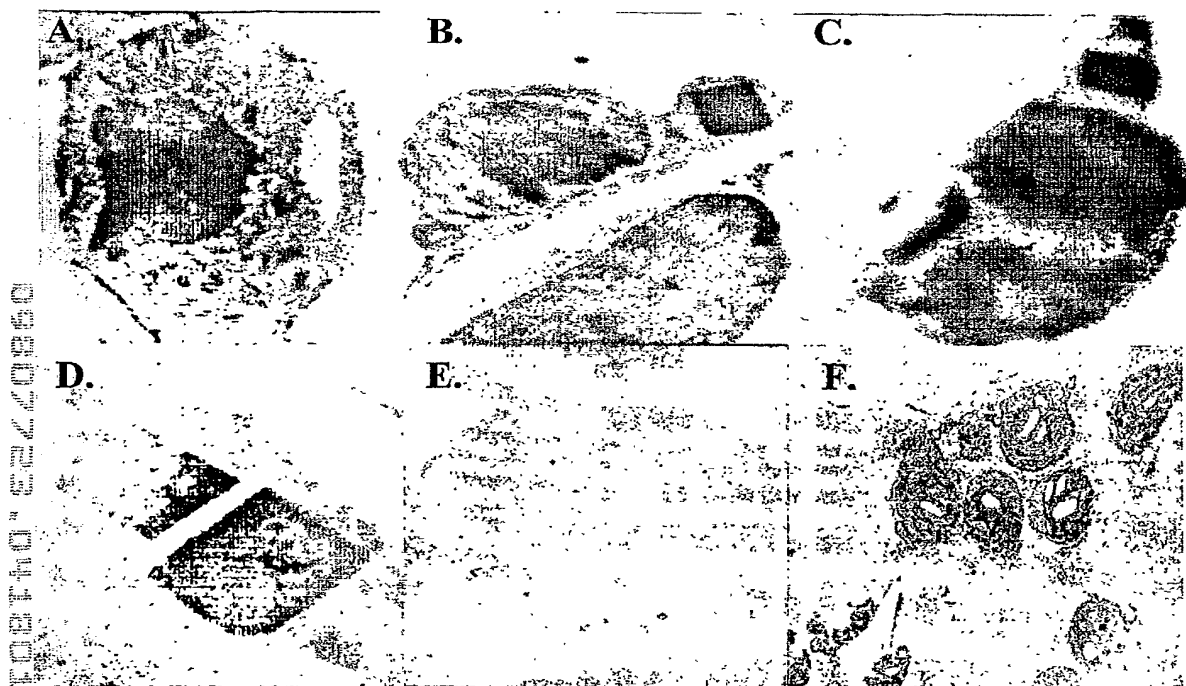
**Figure 6**



Figure 7

Chloroplast genome

pLD: Chloroplast
Transformation Vector

Construct

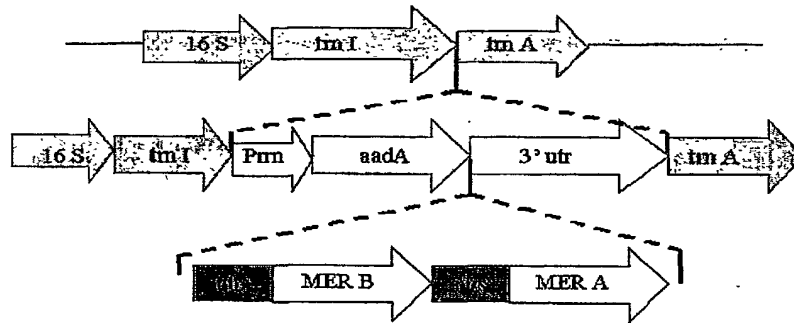
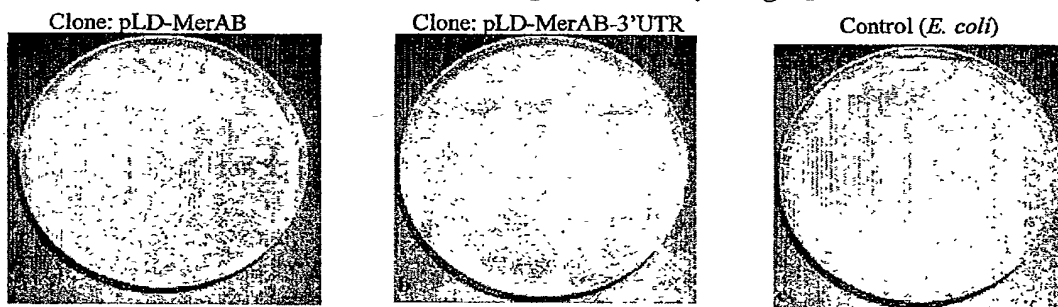
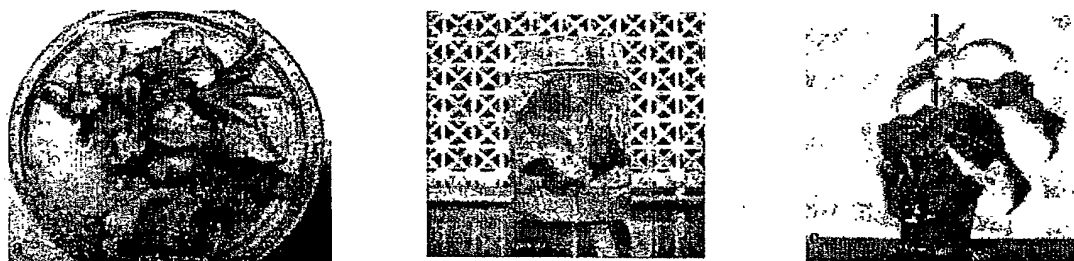


Figure 8

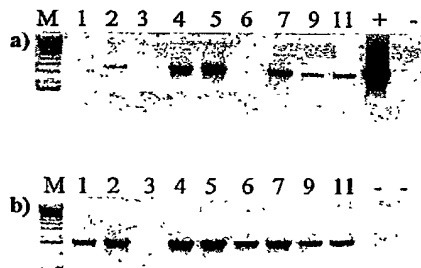
09807723-04801

Fig. 9: Transformed *E. coli* grown in 100 μ M $HgCl_2$ 

Transformed *E. coli* cells containing the vectors pLD-merAB and pLD-MerAB-3'UTR grown in LB at different concentrations of $HgCl_2$. Plates show transformed cells growing at 100 μ M $HgCl_2$. No growth was observed in the control.

Fig. 10: Chloroplast Transgenic plants

- a) Transgenic plant shoot induction in RMOP with 500 μ g/ml Spec. b) Transgenic plant root induction in MSO with 500 μ g/ml Spec. c) Transgenic plant grown in soil.

Fig. 11: Integration of the mer operon into the chloroplast genome

- a) PCR using specific primers that land in the gene cassette (5P/2M) show a product of 3.8kb size (clones 2, 4, 5, 7, 9, 11). Clones 1 and 3 show no integration of the cassette. Positive control, is plasmid pLD-merAB-3'UTR. Negative control is untransformed plant DNA. b) PCR using specific primers that land within the native chloroplast genome (3P/3M), eliminate mutants (clone 3), showing integration of the cassette into the chloroplast genome (clones: 1, 2, 4, 5, 6, 7, 9, 11. 1.6 kb PCR product).

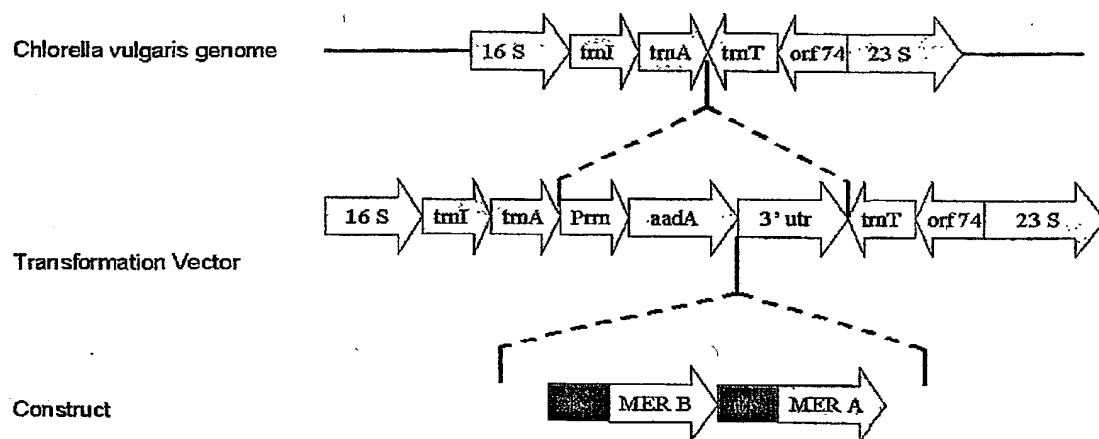


Figure 12

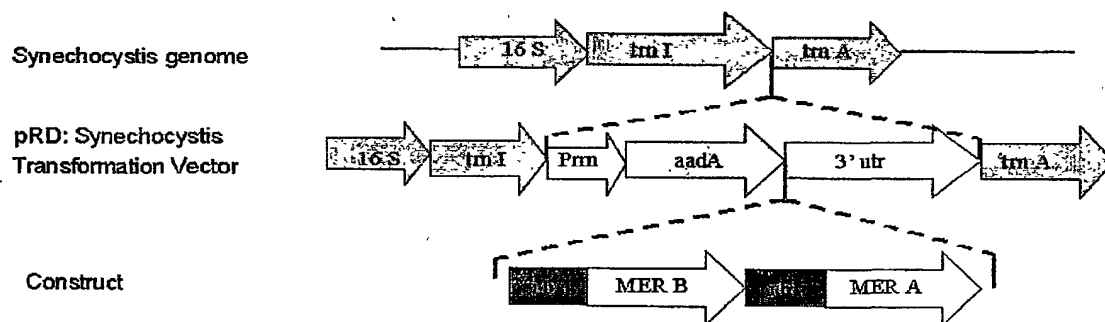


Figure 13

Plastid vector Construction of Lemna

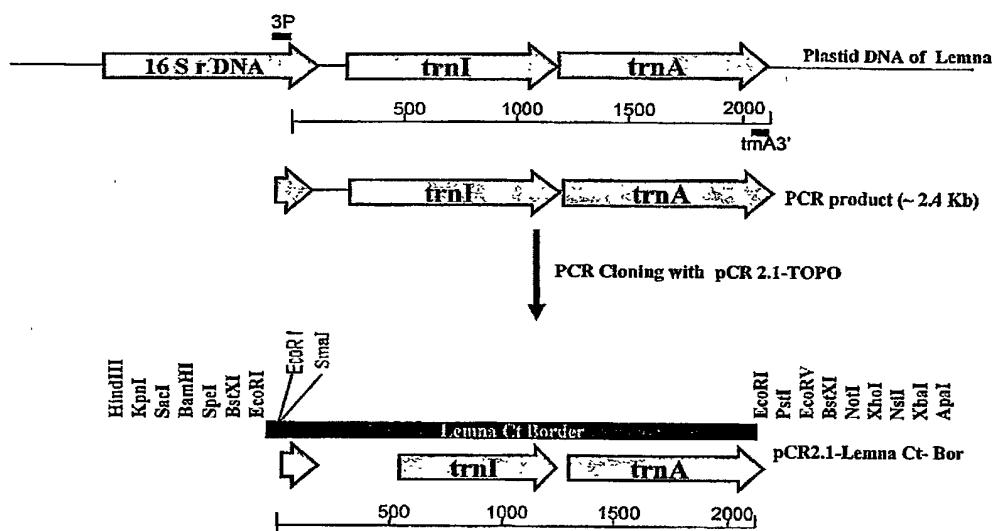


FIGURE 14

Plastid vector Construction of Sugarcane

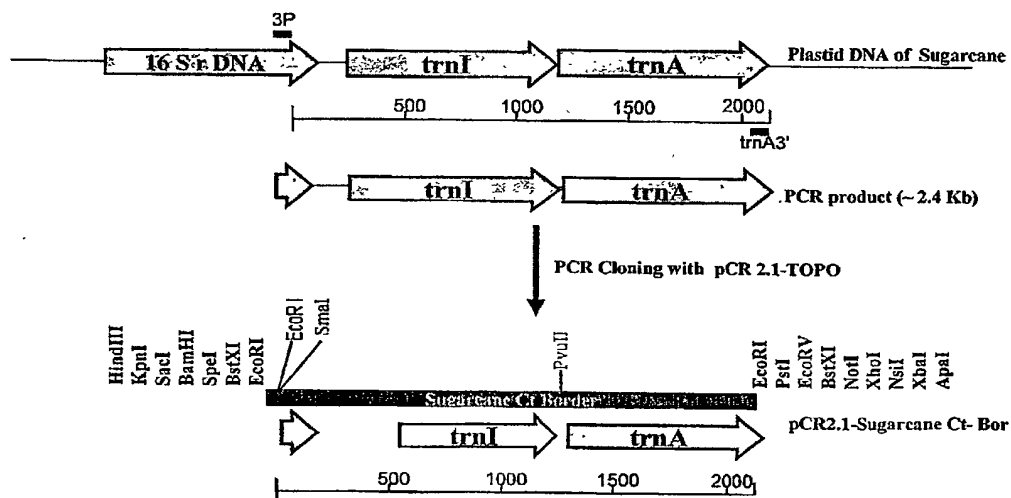


FIGURE 15

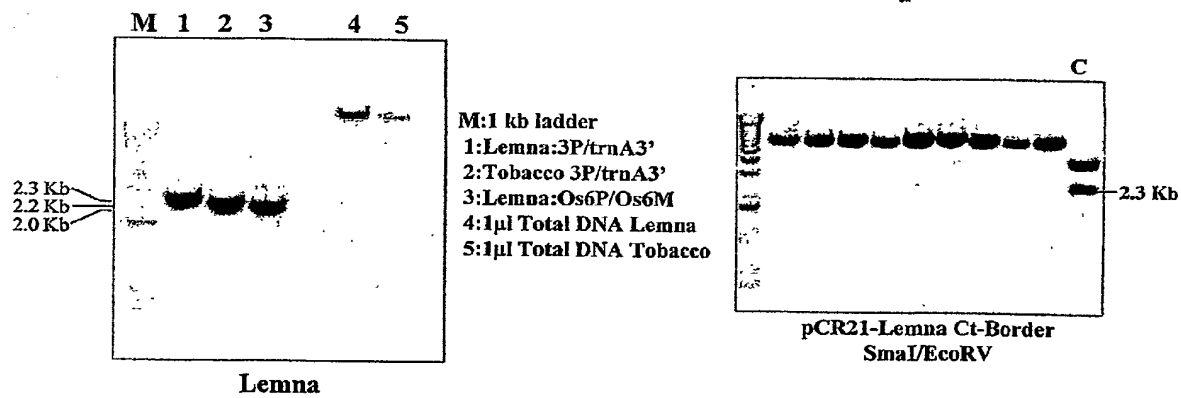


FIGURE 16

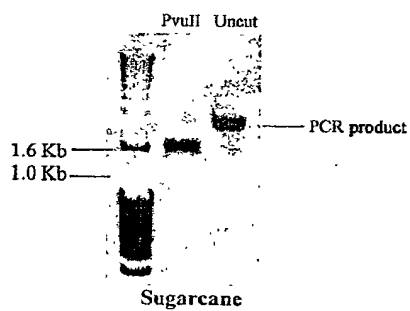
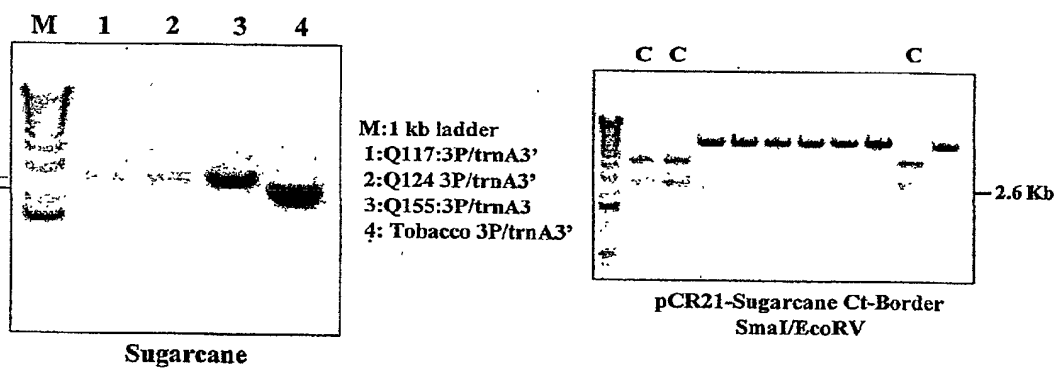


FIGURE 17

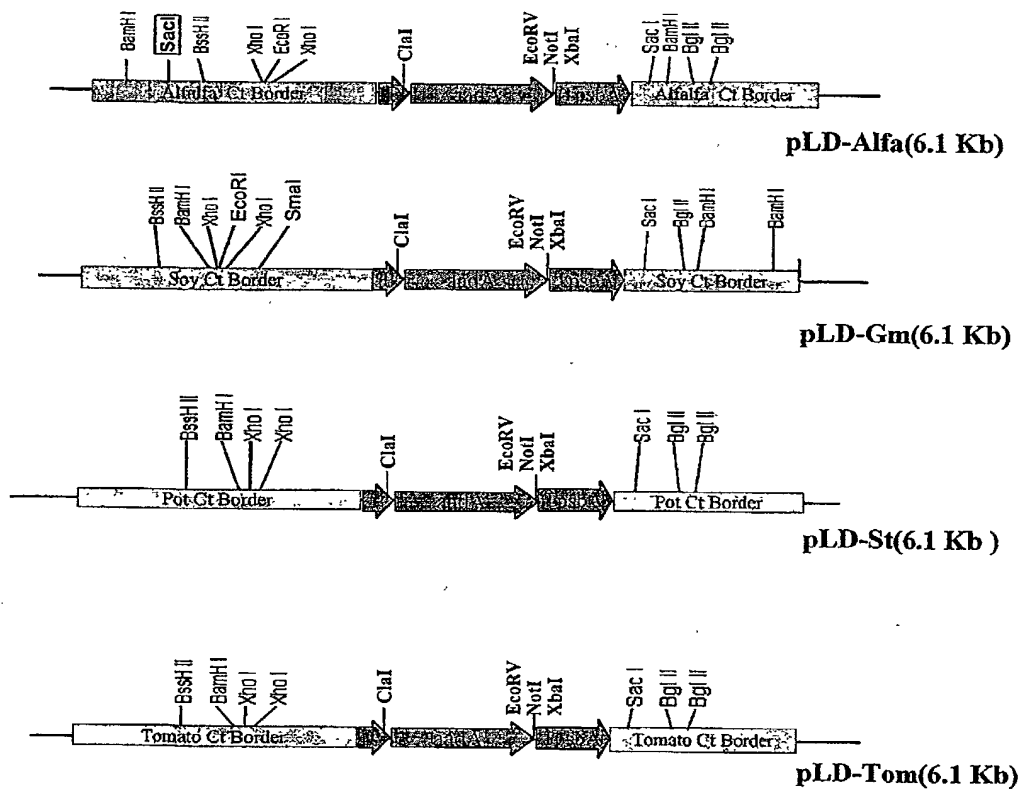


FIGURE 18(A)

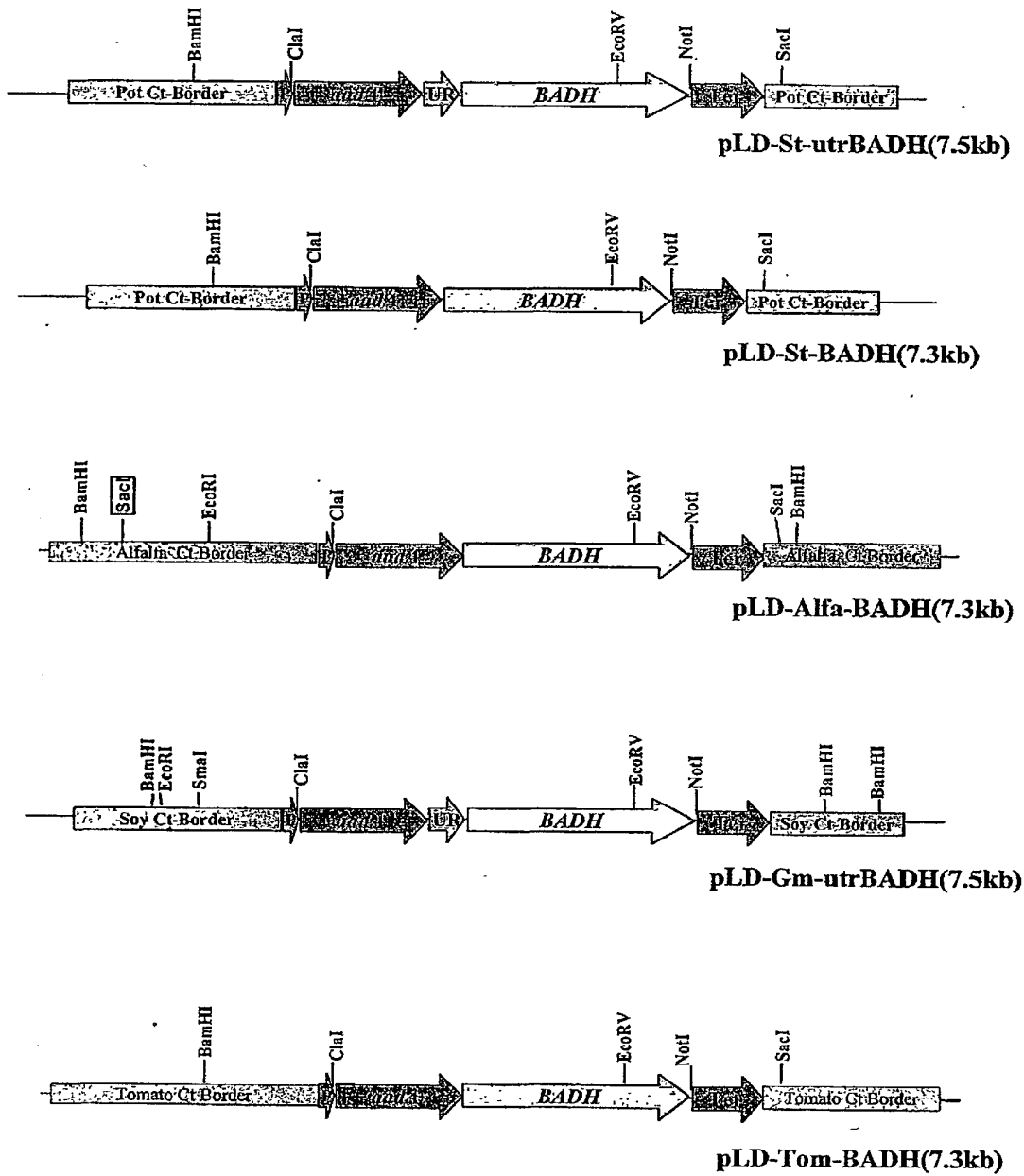


FIGURE 18(B)